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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/685,338	07/23/1996	LIXIAO WANG	S63.2-5902	3558

490 7590 08/12/2003

VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER

RODRIGUEZ, CRIS LOIREN

ART UNIT	PAPER NUMBER
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3763

DATE MAILED: 08/12/2003

35

Please find below and/or attached an Office communication concerning this application or proceeding.

$1 \text{ atm} = 14.69 \text{ psi}$
 $70 - 100^\circ \text{C}$
 $158^\circ \text{F} - 212^\circ \text{F}$

Office Action Summary

Application No.

08/685,338

Applicant(s)

WANG ET AL.

Examiner

Cris L. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43 is/are pending in the application.
- 4a) Of the above claim(s) 35, 36, 40-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. **In view of the examiner's specific knowledge of the existence of a reference which indicate non-patentability of the appealed and reversed claim 43, and in view of the amendment filed on February 28, 2003, PROSECUTION IS HEREBY REOPENED.**

2. Please note that claims 35, 36, and 40-42 have been withdrawn from consideration by the examiner in view of applicant's cancellation proposal in paper No. 28, Supplemental Reply Brief (page 5), and therefore those claims must be canceled in response to this Office Action. Accordingly, claim 43 is the only pending claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton et al (US 5,797,877) in view of Anderson et al (US 5,500,180).

Hamilton teaches a double layer balloon made from at least two concentric layers of different thermoplastic polymers (col. 4, lines 6-29, see also disclosure for more details). Hamilton also teaches single layer balloons. The inclusion of a thermoplastic material in such balloons is to give a superior balance to the balloon properties such as a lower balloon resistance to inflation and deflation pressure (burst strength), and the ability to maintain a pre-selected diameter or hoop strength (radial tensile strength). Hamilton specifies that by varying the fabrication method and/or layer or blend materials and ratios,

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the balance of structural and surface properties of the balloon may be precisely tailored for a specific procedure. However, Hamilton fails to specifically disclose a burst pressure of at least 9 atmospheres, a diameter at 3 atmospheres of about 2 mm or more and an average compliance over the range of from 3 atmospheres to burst of at least 3% per atmosphere.

Anderson teaches a thermoplastic polymeric material balloon having the following parameters such as:

- 1) operational pressures that the balloon can be safely inflated without bursting of at least 12 atm (see Examples 3 and 4),
- 2) a nominal diameter of 3 mm at a certain inflation pressure, and
- 3) a diameter growth disclosed at column 4 lines 59-65 over a range of 3-12 atm.

Anderson also teaches, in column 3 line 32-column 4 line 65,

- 4) an average compliance (distentability) to burst the balloon, and in column 6 lines 5-23 discloses average compliance for the balloon of about 5 to 20%, and
- 5) burst pressures of at least 9 atm (see Examples 3 and 4).

Further, Anderson teaches that all these balloon characteristics depend from the material construction and the wall thickness of the balloon that are controllable during the process of making the balloon. Given the teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hamilton's single or double balloons with the Anderson's balloon material parameters and characteristics, since such parameters are deemed matters of design choice, well within the skill of the ordinary artisan, obtained through routine experimentation in determining optimal results of the claimed balloon.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cris L. Rodriguez whose telephone number is (703) 308-2194. The examiner can normally be reached on 7:30 am - 4:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (703) 308-3552. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3590 for regular communications and (703) 305-3590 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

June 23, 2003



Cris L. Rodriguez
Examiner
Art Unit 3763



BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700